STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

**Sargent Materials**
**Penobscot County**
**Lincoln, Maine**
**A-1030-71-A-N**

**Departmental**
**Findings of Fact and Order**
**Air Emission License**

After review of the air emission license application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## I. REGISTRATION

### A. Introduction

Sargent Materials (Sargent), located in Lincoln, Maine has applied for a new Air Emission License, for equipment that was previously owned and operated by G.E. Goding. The new license is for the operation of a concrete batch plant and their crushed stone and gravel facility.

### B. Emission Equipment

**Concrete Plant**

| Equipment | Process Rate | Control Devices |
|---|---|---|
| Concrete Batch Plant | 75 cubic yards/hour | 3 Baghouses: (1) batch plant<br>(2) storage silos |
| Portable Concrete Batch Plant | 125 cubic yards/hour | 3 Baghouses: (1) batch plant<br>(2) storage silos |
| Pneumatic Conveyor | 18 tons/hour | baghouse |

**Rock Crushers**

| Designation | Power Source | Process Rate (tons/hour) | Control Device |
|---|---|---|---|
| Lincoln Jaw | electrical | 60 | spray nozzles |
| Lincoln GYRO | electrical | 60 | spray nozzles |

**Fuel Burning/Diesel Units**

| Source ID | Max. Capacity | Max. Firing Rate | Fuel Type, %S |
|---|---|---|---|
| Diesel Generator #2 | 0.9 MMBtu/hr | 6.5 gal/hr | diesel fuel, 0.05% |
| Diesel Generator #4 | 1.9 MMBtu/hr | 14 gal/hr | diesel fuel, 0.05% |
| Boiler #1 | 3.3 MMBtu/hr | 24 gal/hr | #2 oil * |
| Boiler #2 (spare) | 1.4 MMBtu/hr | 9.9 gal/hr | #2 oil * |

* fuel meets the criteria in ASTM D396 for #2 fuel oil.

C. Application Classification

A new source applying for an air emissions license is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

| Pollutant | Future License (TPY) | Sig. Level |
|---|---|---|
| PM | 0.8 | 100 |
| $PM_{10}$ | 0.8 | 100 |
| $SO_2$ | 2.0 | 100 |
| $NO_x$ | 15.8 | 100 |
| CO | 3.4 | 100 |
| VOC | 1.3 | 50 |

The Department has determined the facility is a minor source and the application has been processed through Major and Minor Source Air Emission License Regulations, 06-096 CMR 115 (last amended December 24, 2005).

## II. BEST PRACTICAL TREATMENT

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Definitions Regulation, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and

existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Concrete Batch Plants

Sargent is licensed to operate a 75 cubic yard/hour concrete batch plant and two batch plant storage silos. Sargent is also licensed to operate a portable 125 cubic yard/hour concrete batch plant with two portable cement silos. To meet the requirements of BACT for control of particulate matter (PM) emissions from the cement silos, particulate emissions shall be vented through a baghouse for each silo maintained for 99% removal efficiency. Visible emissions from each cement silo baghouse is limited to no greater than 10% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. The facility shall take corrective action if visible emissions from either baghouse exceed 5% opacity.

All components of the concrete batch plants shall be maintained so as to prevent PM leaks. Visible emissions from concrete batching operations shall not exceed 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period.

C. Rock Crushers

Sargent is licensed to operate a Lincoln Jaw rock crusher and Lincoln GYRO rock crusher with rated capacities of 60 tons per year each and manufactured in 1965. The rock crushers are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart OOO for Nonmetallic Mineral Processing Plants manufactured after August 31, 1983, with capacities greater than 150 tons/hr for portable plants and greater than 25 tons/hr for non-portable plants.

The regulated pollutant from the rock crushers is particulate emissions. To meet the requirements of BACT for control of particulate matter (PM) emissions from the rock crushers, Sargent shall maintain water sprays on the rock crushers and operate as needed to control visible emissions. Visible emissions from the rock crushers shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

Therefore, Sargent shall continue to maintain and operate water sprays for particulate control on all rock crushers.

D. Diesel Generators #2 and #4

Generator #2 was manufactured in 1977 and is utilized primarily to provide electrical power to the rock crushers. Generator #4 was manufactured in 2005 and used primarily for electrical power to the portable concrete batch plant. Generator #2 and #4 were manufactured before April 1, 2006. Therefore, Generator #2 and #4 are not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

A summary of the BACT analysis for Generator #2 (0.9 MMBtu/hr) and Generator #4 (1.9 MMBtu/hr) is the following:

1. The total fuel use for the generators shall not exceed 50,000 gallons per year based on a calendar year of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. Low Sulfur Fuel, 06-096 CMR 106 (last amended July 4, 1999) regulates fuel sulfur content, however in this case a BPT/BACT analysis for $SO_2$ determined a more stringent limit of 0.05% was appropriate and shall be used.
3. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits. The $PM_{10}$ limits are derived from the PM limits.
4. $NO_x$, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
5. Visible emissions from each generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

E. Boiler #1 and #2

Sargent operates two boilers (Clayton Steam Generators rated at 3.3 MMBtu/hr and 1.4 MMBtu/hr), with one operating as a spare unit to the other. The units are used primarily to generate steam and heat water for the concrete process. Total fuel use in the boilers shall not exceed 50,000 gal/year (calendar year basis) of fuel oil, which meets the criteria in ASTM D396 for #2 fuel oil.

Opacity from the boilers (steam generators) shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in any 3-hour period. Therefore to meet BACT for the boilers, Sargent shall meet the opacity, fuel type, and fuel use limits described in this air license.

F. Stock Piles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

G. General Process Emissions

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, etc.) shall not exceed an opacity of 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period.

H. Facility Emissions and Fuel Use Caps

Facility emissions are based on an annual fuel limit of 50,000 gallons of diesel fuel and 50,000 gallons of #2 fuel oil.

**Total Licensed Annual Emissions for the Facility**
(used to calculate the annual license fee)

| | PM | $PM_{10}$ | $SO_2$ | $NO_x$ | CO | VOC |
|---|---|---|---|---|---|---|
| Steam Generator | 0.4 | 0.4 | 1.8 | 0.7 | 0.1 | 0.1 |
| Generators #2 & #4 | 0.4 | 0.4 | 0.2 | 15.1 | 3.3 | 1.2 |
| **Total TPY** | **0.8** | **0.8** | **2.0** | **15.8** | **3.4** | **1.3** |

## III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor new source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

## ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1030-71-A-N, subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

**STANDARD CONDITIONS**

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions. [06-096 CMR 115]

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive

dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. § 353. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

**SPECIFIC CONDITIONS**

(16) **Concrete Batch Plants**

A. Particulate emissions from each cement silo shall be vented through a baghouse and all components of the concrete batch plants shall be maintained so as to prevent PM leaks. [06-096 CMR 115, BPT]

B. To document maintenance for each cement silo's baghouse, Sargent shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the concrete batch plant location. [06-096 CMR 115, BPT]

C. Opacity from each cement silo baghouse is limited to no greater than 10% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. Sargent shall take corrective action if visible emissions from any baghouse exceed 5% opacity. [06-096 CMR 101]

D. PM emissions from the concrete batching operations shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(17) **Rock Crushers**

A. Sargent shall install and maintain spray nozzles for particulate control on Rock Crusher #1 and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six (6) minute block average basis. [06-096 CMR 115 (BPT) and 06-096 CMR 101]

B. Sargent shall maintain a log detailing and quantifying the hours of operation on a daily basis for all of the primary, secondary and tertiary rock crushers. The operation log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

C. Sargent shall maintain a log detailing the maintenance on particulate matter control equipment (including spray nozzles). Sargent shall perform monthly inspections of any water sprays to ensure water is flowing to the correct locations and initiate corrective action within 24 hours if water is found to not be flowing properly. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the rock crushing location. [06-096 CMR 115, BPT]

D. Sargent shall either have an initial performance test performed on the rock crushers per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675 or provide documentation to the Department that the initial performance test was previously performed. (Documentation that a successful initial performance test was performed outside of Maine may be accepted.)

E. An initial performance test must be completed within 60 days after achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup of the unit. If the initial performance test for a facility falls within a seasonal shutdown, then with approval from the Department, the initial performance test may be postponed until no later than 60 calendar days after resuming operation of the affected equipment

F. Sargent shall conduct a performance test at least once every five years.

G. Sargent shall submit a test notice to the regional inspector at least 7 days prior to a performance test.

(18) **Diesel Generator and Boilers (Steam Generators)**

A. Total fuel use for Generator #2 and #4 shall not exceed 50,000 gal/yr of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of annual fuel use shall be kept on a calendar year basis. [06-096 CMR 115, BPT]

B. Sargent shall not exceed the total use of 50,000 gal/year of ASTM D396 #2 fuel oil on a calendar year basis. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of annual fuel use shall be kept on a calendar year basis. [06-096 CMR 115, BPT]

C. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---|---|---|---|
| Boiler #1, Boiler #2 (each) | PM | 0.12 | MEDEP, 06-096 CMR 103, Section 2(B)(1)(a) |
| Generator #2 & #4 | PM | 0.12 | MEDEP, 06-096 CMR 103, Section 2(B)(1)(a) |

D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

| Emission Unit | PM (lb/hr) | $PM_{10}$ (lb/hr) | $SO_2$ (lb/hr) | $NO_x$ (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---|---|---|---|---|---|---|
| Boiler #1 | 0.4 | 0.4 | 1.7 | 1.3 | 0.2 | 0.1 |
| Boiler #2 | 0.2 | 0.2 | 0.7 | 0.6 | 0.1 | 0.1 |
| Generator #2 | 0.1 | 0.1 | 0.1 | 4.4 | 1.0 | 0.4 |
| Generator #4 | 0.2 | 0.2 | 0.1 | 8.4 | 1.8 | 0.7 |

E. Visible emissions from Boiler #1, Boiler #2, Generator #1, and Generator #4 shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(19) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(20) **General Process Sources**

Visible emissions from any other general process (non-NSPS crusher conveyor belts, bucket elevators, bagging operations, etc.) shall not exceed an opacity of 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 115, BPT]

(21) **Equipment Relocation** [06-096 CMR 115, BPT]

A. Sargent shall notify the Bureau of Air Quality, by a written notification at least 48 hours prior to relocation of any equipment carried on this license. Written notice may be sent by mail, facsimile (fax), or e-mail. Notification sent by mail shall be sent to the address below or to a Department Regional Office:

Attn: Relocation Notice
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Equipment relocation notification can also be done on-line with e-notice at www.maine.gov/dep/air/compliance/forms/relocation. The notification shall include the address of the equipment's new location, an identification of the equipment and the license number pertaining to the relocated equipment.

B. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.

(22) Sargent shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [06-096 CMR 115, BPT]

(23) Sargent shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard [38 M.R.S.A. §605-C].

DONE AND DATED IN AUGUSTA, MAINE THIS 21st DAY OF May , 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks for
DAVID P. LITTELL, COMMISSIONER

**The term of this license shall be five (5) years from the signature date above.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES
Date of initial receipt of application: February 24, 2010
Date of application acceptance: March 2, 2010
Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality

FILED
MAY 25 2010
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE